

Using the short and long splints

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Descriptive data - patients with fracture of the Neck Femur

Table 1: Patients' characteristics

		Experimental - Leg Brace (N=23)		control - Pillow (n=10)	
		n	%	n	%
Sex	female	17	74%	8	80%
Fracture of neck femur	right	10	50%	2	22%
The score in Norton scale lower than 14	yes	1	4%		
Diabetes	yes			2	20%
Type of bracing- before surgery	brace	19	83%	1	10%
Type of bracing - after surgery	brace	23	100%	1	10%
Long leg brace removed during hospital admission as a result of complications	yes	5	31%		
Release to:	home	8	38%	4	40%
	Other hospital	12	57%	6	60%
		Mean	s.d	Mean	s.d
Age		71.78	16.44	80.30	6.63
Number of hospital admission days		7.38	2.44	8.40	2.76

	Mean	s.d
Number of treatment days with brace (experimental group)	5.86	2.19

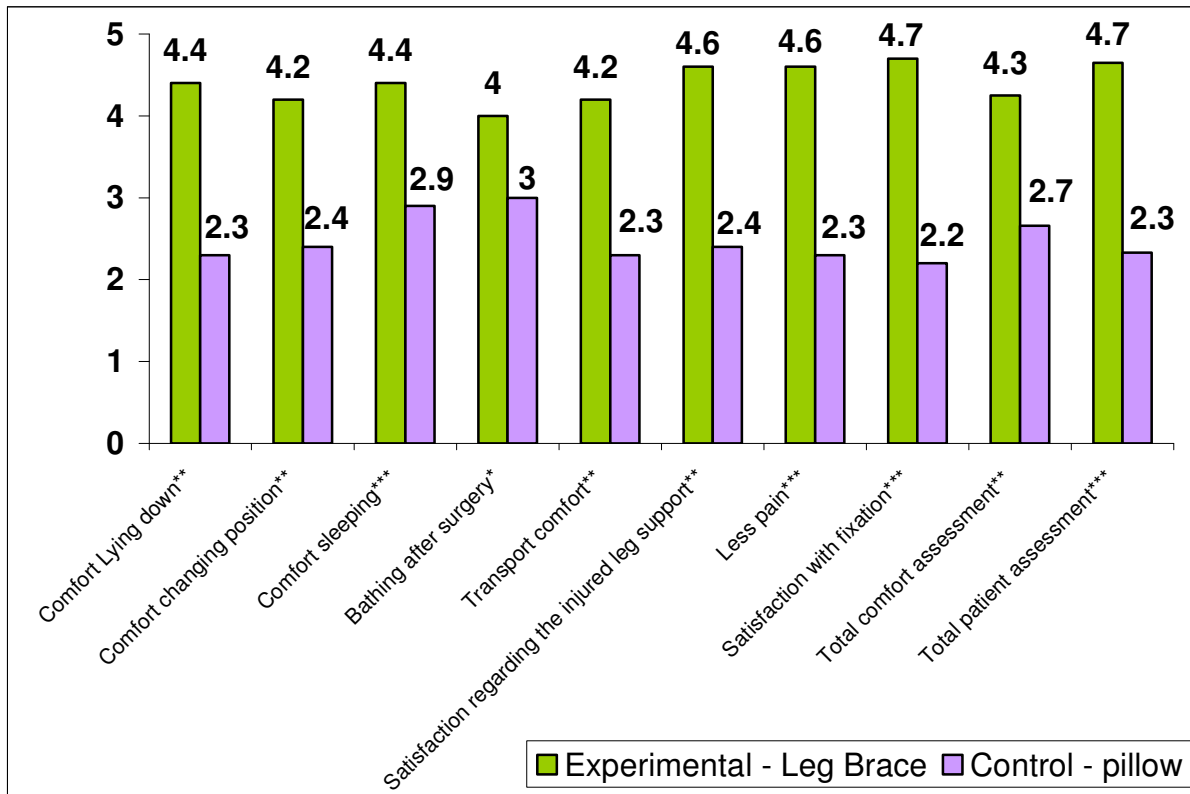
Table 2: Patients assessment of the splint before surgery

		Before surgery		Calculated t
		Experimental group	control group	
Did you feel comfortable lying down?	Mean	4.41	2.33	4.87**
	s.d.	.51	1.22	
	N	17	9	
Did you feel comfortable changing position?	Mean	4.19	2.44	3.82**
	s.d.	.40	1.33	
	N	16	9	
Did you feel comfortable sleeping?	Mean	4.41	2.89	5.02***
	s.d.	.51	1.05	
	N	17	9	
Did you feel comfortable performing Bathing-clothing activities?	Mean	4.00	3.00	2.25*
	s.d.	.94	.93	
	N	10	8	
Were you comfortable during transport?	Mean	4.15	2.29	3.68**
	s.d.	1.07	1.11	
	N	13	7	
Feeling satisfied regarding the injured leg support	Mean	4.65	2.44	4.79**
	s.d.	.49	1.33	
	N	17	9	
Pain relief in the injured limb	Mean	4.59	2.33	7.70***
	s.d.	.62	.87	
	N	17	9	
Were you satisfied with the fixation while the injured limb was treated?	Mean	4.67	2.22	5.41***
	s.d.	.49	1.30	
	N	15	9	
Total comfort assessment	Mean	4.25	2.66	4.46**
	s.d.	.43	1.03	
	N	17	9	
Total patient assessment	Mean	4.65	2.33	5.86***
	s.d.	.43	1.14	
	N	17	9	

* p<0.05, ** p<0.01, *** p<0.001

Likert Scale 1-5: 5 strongly agree, 1 Completely Disagree

Diagram 1: Patient assessment of the splint before surgery



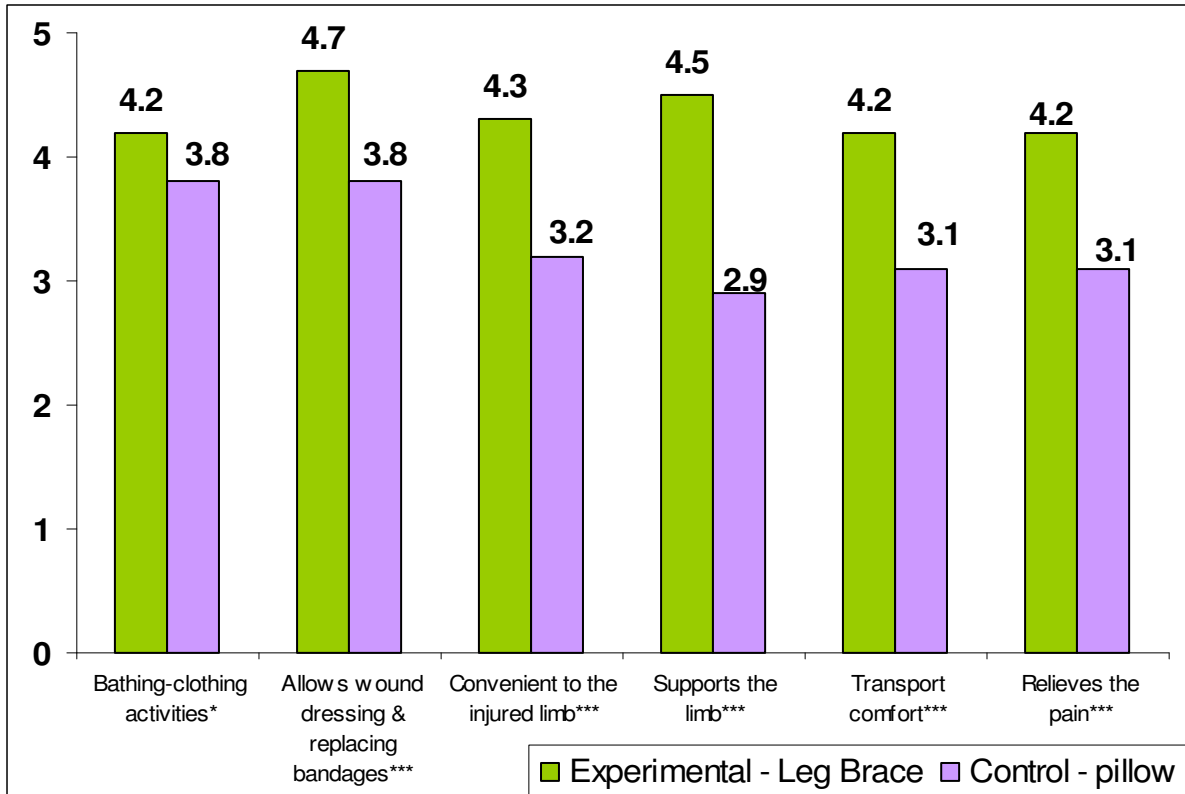
* p<0.05 ** p<0.01, *** p<0.001

Table 3: Differences in nurses` assessment of the splint

		Experimental Group N=72	Control Group N=25	Calculated T
Bathing-clothing activities	Mean	4.19	3.82	2.40*
	s.d	.66	.52	
Allows wound dressing & replacing bandages	Mean	4.67	3.81	5.69***
	s.d	.40	.64	
Convenient to the injured limb	Mean	4.31	3.24	7.08***
	s.d	.46	.71	
Supports the limb	Mean	4.49	2.92	11.49***
	s.d	.41	.64	
Comfortable during transport	Mean	4.22	3.06	10.29***
	s.d	.47	.54	
Relieves the pain	Mean	4.19	3.08	5.16***
	s.d	.43	1.05	

* p<0.05, *** p<0.001

Diagram 2: Differences in nurses` assessment of the splint



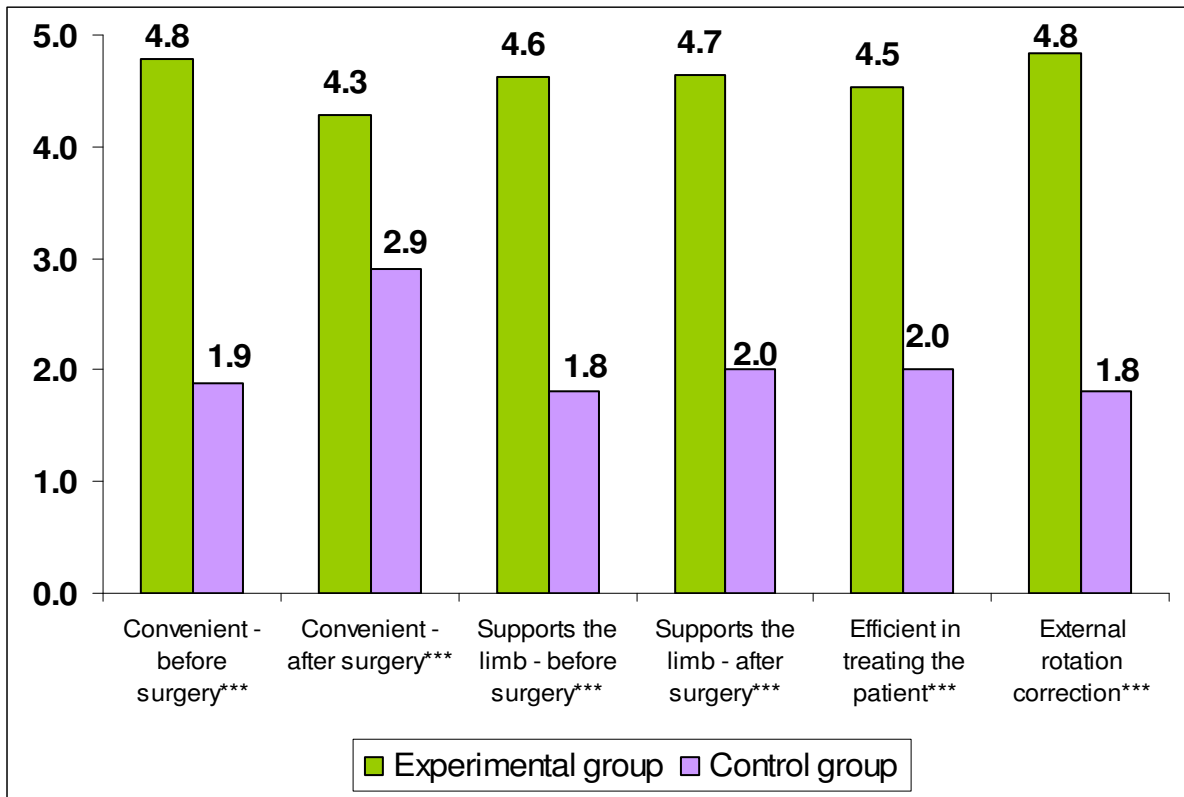
* p<0.01, *** p<0.001

Table 4: Differences in Physicians` assessment of the splint

		experimental group n=35	control group n=16	Calculated T
Convenient - before surgery	Mean	4.78	1.88	13.93***
	s.d.	.40	.79	
Convenient - after surgery	Mean	4.28	2.90	4.20***
	s.d.	.77	1.20	
Supports the limb before surgery	Mean	4.63	1.81	14.44***
	s.d.	.39	.73	
Supports the limb - after surgery	Mean	4.65	2.00	10.30***
	s.d.	.48	.89	
Efficient in treating the patient	Mean	4.53	2.00	8.40***
	s.d.	.44	1.09	
Corrects External rotation	Mean	4.83	1.81	13.77***
	s.d.	.39	.83	

*** p<0.001

Diagram 3: Differences in Physicians' assessment of the splint



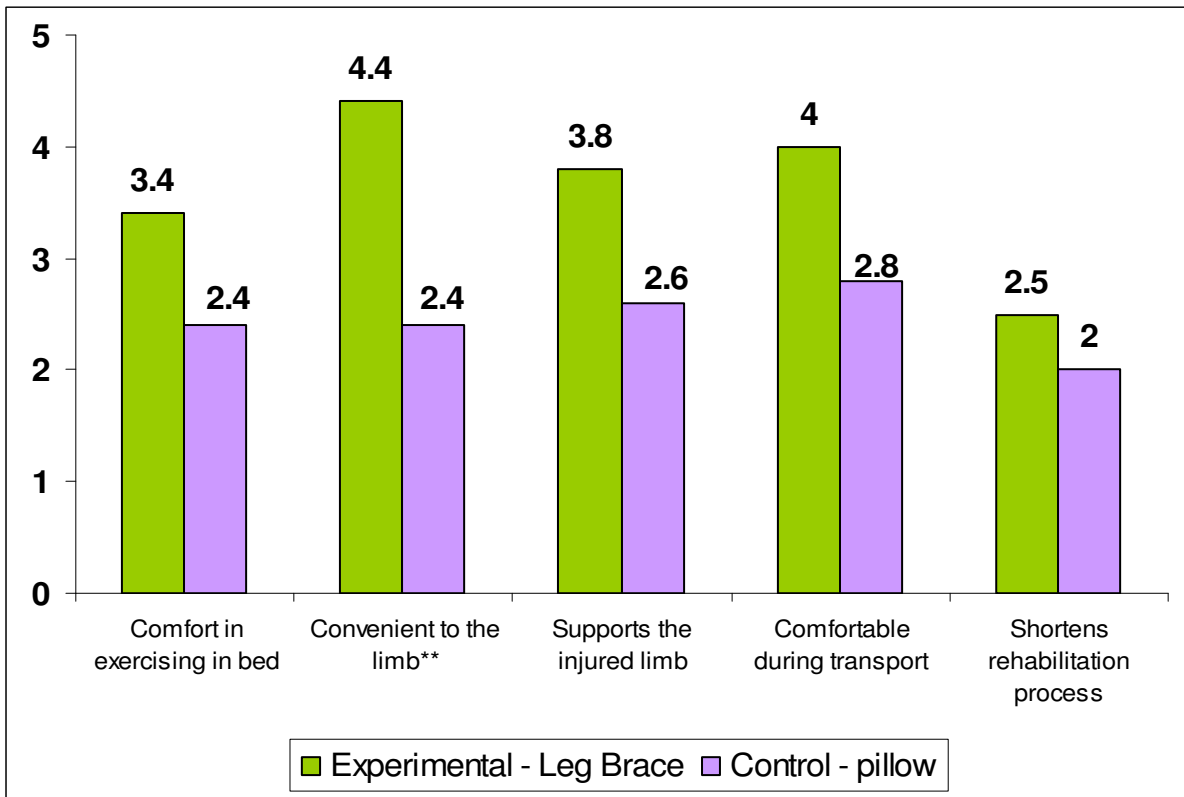
*** p<0.001

Table 5: Differences in Physiotherapists' assessment of the splint (Non-parametric test)

		Experimental group	control group	K-W
Comfort in exercising in bed	Mean	3.40	2.40	1.52
	s.d	1.34	.55	
	N	5	5	
Convenient to the limb	Mean	4.40	2.40	7.26**
	s.d	.55	.55	
	N	5	5	
Supports the injured limb	Mean	3.80	2.60	3.03
	s.d	.84	1.34	
	N	5	5	
Comfortable during transport	Mean	4.00	2.80	3.03
	s.d	1.00	.84	
	N	5	5	
Shortens rehabilitation process	Mean	2.50	2.00	1.60
	s.d	1.00	.00	
	N	4	4	

** p<0.01

Diagram 4: Differences in Physiotherapists` assessment of the splint



** p<0.01

Table 6: Physicians' assessment of the splint - fracture of the Neck Femur

(n=8)	Agree + Strongly agree
Recommends leg brace - after surgery	87.5%
Supports the limb - before surgery	75.0%
Supports the limb - after surgery	75.0%
Corrects limb external rotation	75.0%
Suitable medical solution	75.0%
Recommends leg brace - before surgery	75.0%

Table 7: Nurses' assessment of the splint - fracture of the Neck Femur

(n=32)	Agree + Strongly agree
Helps control the injured limb (ankle & foot)	77.4%
Ease the patient mobility in comparison to the pillow	73.9%
Ease the patient bathing in comparison to the pillow	72.7%
Limb support - before surgery (ankle & foot)	71.9%
Limb support - before surgery	70.8%
Satisfaction with nursing treatment - after surgery	70.8%
Provides Satisfactory treatment (ankle & foot)	68.8%
Satisfaction with nursing treatment (ankle & foot)	68.8%
Limb support - after surgery	62.5%
Satisfaction with nursing treatment - before surgery	62.5%
Eases the patient position change in comparison to the pillow	56.5%
Helps treat open wound treatment (ankle & foot)	56.3%
Limb support after surgery (ankle & foot)	53.1%

Descriptive Data of Patient that Used Brace (leg injury)

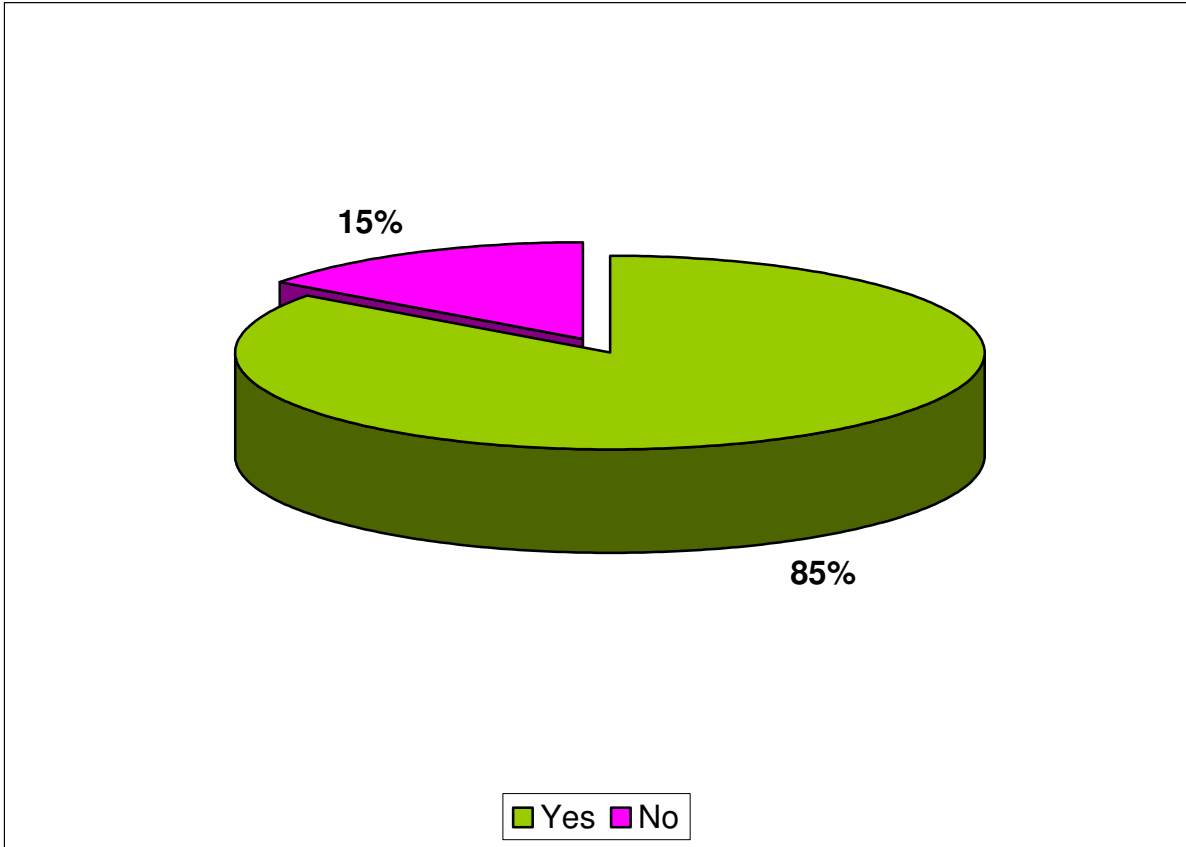
Table 1:

		N	%
Type of Accident (injured)	Work+road	17	81%
	home	4	19%
Injury location (body)	foot	19	95%
	thigh	1	5%
Did you use the padding?	yes	16	84%
	no	3	16%
Willingness to use the brace (Patient that used L.L.B)	yes	17	85%
	no	3	15%

Remarks concerning brace versus Canadian/triplet splint

Brace	Canadian/triplet
The L.L.B is too long and a bit complicated to assemble.	Does not support the leg well enough n=3
The stabilizer dramatically reduces the patient's pain during a car ride	The kit does not reduce the limb shocks during a car ride and causes pain to the patient
The straps are complicated and not friendly. Pumping up takes too much time. The Canadian kit is more convenient to use.	There is a need for support to the limb, but it isn't comfortable in different situations such as a mismatch of the stabilizer size.
The stabilizer relieved the patient's pain, but assembly is complicated.	
In the aspect of the fixation it is better than the Canadian but the treatment time is too long	
Reduces pain significantly	
Assembly is complicated, the pump is high pressured, but very efficient	Does the job but not easy to assemble and to remove at the hospital

Diagram 1. Willingness to Use the Leg Brace



Descriptive Data of Subjects that used Canadian/triplet splint

Table 2.

		N	%
Type of Accident (injured)	Work + road	11	69%
	home	3	19%
	other	2	13%
Injury location (body)	foot	14	88%
	thigh	2	12%
Type of stabilizer that assembled	Canadian	13	81%
	triplet	3	19%

Table 3: chi square, correlation between type of support to staff approaches

(The percents sum-up subjects that agree and strongly agree with each item)

In your opinion L.L.B /Canadian is:	Type of splint				Chi square
	Brace		Canadian		
	n	%	n	%	
Fast assembly	12	63.2%	9	69.2%	0.13
Improves patient mobility	14	87.5%	6	54.5%	3.69**
Reduces shocks during car ride	19	100.0%	3	25.0%	20.08***
Supports the injured limb	15	83.3%	10	76.9%	0.2
Convenient assembly & removal	12	85.7%	7	53.8%	3.28*

*p=0.07 ** ,p=0.05,*** p<0.01

Diagram2:

